

**REMARKS**

With this Amendment, claims 5, 14, 15, and 16 are cancelled. Therefore, claims 1-4, and 6-13 are all the claims currently pending in this Application.

Claims 1, 4, 5, 7, 10, 11, and 16 stand rejected under 35 U.S.C. § 102(e) as allegedly unpatentable over Fujiyama (U.S. Publication 2003/0085387). Claims 2, 3, 8, 9, and 12-15 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Fujiyama in view of Fukuba (U.S. Patent 6,871,000). Claim 6 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Fujiyama in view of Fujii (JP 10-245410).

Regarding claim 1, with this Amendment, Applicants amend claim 1 to include the limitation: “wherein molecules in the core region are aligned along the longitudinal axis, and a degree of the alignment varies along a direction going from the center line to a peripheral portion perpendicular to the center line, and the variation of the alignment degree causes a refractive index profile in the core.” This amendment is supported in the originally-filed specification at least at page 11, lines 7-19 and original claim 5. The Examiner asserts that paragraph 0112 of Fujiyama discloses that molecules of the core region of the optical fiber are aligned along the longitudinal axis and that a degree of the alignment varies along a direction from the center line to the periphery (perpendicular to the center line). Applicants respectfully disagree. This portion of Fujiyama merely describes the molecules’ orbital calculation (the positions of the substituents added to the benzene ring) and the relation between the positions and the symmetry property of the molecule. Fujiyama fails to disclose or suggest any alignment of the molecules within the optical fiber, or that the alignment varies with radial distance from the center line.

Additionally, Applicants submit that neither Fukuba nor Fujii remedies this deficiency of Fujiyama.

Therefore, Applicants submit that claim 1 is patentable over Fujiyama and that claims 2-4, and 7-13 are patentable at least by virtue of their dependence on claim 1. Applicants respectfully request that the rejections of claims 1-4 and 7-13 be reconsidered and withdrawn.

Regarding claim 6, Applicants submit that none of the cited references teaches or suggests “creating a temperature-difference of 5 °C or larger between a center portion and a periphery portion of the preform before the preform is drawn into fiber,” as recited. The Examiner asserts that Fujii teaches limitation. Applicants respectfully disagree. Fujiyama recites: “set the difference between the glass transition temperature (T<sub>g</sub>) of the layer” (see e.g. Abstract). The T<sub>g</sub> is an intrinsic temperature of a layer and is not an actual temperature of a layer. Claim 6 specifically recites that the perform passes through at least two zones where different temperatures are set, thereby creating a temperature difference of 5°C or larger between a center portion and a peripheral portion of the perform. This temperature difference is an actual difference, not a difference in T<sub>g</sub>. Therefore, Applicants submit that Fujii fails to teach or suggest this limitation.

Thus, Applicants submit that claim 6 is patentable over the cited references and respectfully request that the rejection of claim 6 be reconsidered and withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

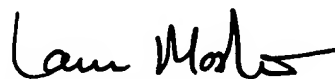
**AMENDMENT UNDER 37 C.F.R. § 1.111**  
U.S. Application No. 10/562,827

**Q91750**

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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**23373**

CUSTOMER NUMBER

Date: January 9, 2007